PC10500US

Appln. No.: 10/524,552

Amendment Dated May 7, 2008

Reply to Office Action of March 7, 2008

Amendments to the Claims: This listing of claims will replace all prior versions, and listings, of claims in the application

Listing of Claims:

1-12 Cancelled

13. (Currently Amended) Method for actuating an electromechanical parking brake device for a brake that can be actuated by means of an electromechanical actuator, in which the actuator is comprised of an electric motor and a reduction gear that is connected downstream of the electric motor and is provided for converting a rotational motion into a translatory motion, and the electromechanical parking brake device is provided in the form of a locking mechanism which can prevent the rotational motion of the actuator in the direction of release and which can only be released again by further application, wherein during the actuation of the parking brake device, a mean value M_{park} of the torque of the electric motor, which is required for exerting the application force of the brake corresponding to the application of the parking brake, is determined and stored while the actuator position (ϕ) is simultaneously detected, and the electric motor is actuated at later points in time in such a fashion that it generates said torque M_{park} that is multiplied by a correction factor $k\eta = >1$ in order to maintain or increase the exerted tension force, wherein the determined mean torque value (Mpark) is controlled with regard to a lower limit value and is set to this lower limit value when it falls below this limit value.

14. (Previously Presented) Method according to claim 13, wherein the detection of the torque (M_{park}) is achieved by measuring the current supplied to the electric motor.

15. Cancelled

16. (Previously Presented) Method according to claim 13, wherein the electric motor after the first actuation of the parking brake device is actuated in previously defined periods of time in such a way that it generates the torque (M_{park}) multiplied by the correction factor $k\eta =>1$.

17. (Previously Presented) Method according to claim 13, wherein the electric motor is actuated depending on an actuator temperature difference in such a way that it generates the

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torque (M_{park}) multiplied with the correction factor $k\eta =>1$.

18. (Currently Amended) Method according to claim 13 for actuating an electromechanical parking brake device for a brake that can be actuated by means of an electromechanical actuator, in which the actuator is comprised of an electric motor and a reduction gear that is connected downstream of the electric motor and is provided for converting a rotational motion into a translatory motion, and the electromechanical parking brake device is provided in the form of a locking mechanism which can prevent the rotational motion of the actuator in the direction of release and which can only be released again by further application, wherein during the actuation of the parking brake device, a mean value Mpark of the torque of the electric motor, which is required for exerting the application force of the brake corresponding to the application of the parking brake, is determined and stored while the actuator position (φ) is simultaneously detected, and the electric motor is actuated at later points in time in such a fashion that it generates said torque M_{park} that is multiplied by a correction factor $k\eta = >1$ in order to maintain or increase the exerted tension force, wherein the actuator temperature difference corresponds to the difference between the actuator temperature during the first actuation of the parking brake device or the last operation the electric motor, respectively, for generating the torque (M_{park}) multiplied by the correction factor $k\eta =>1$ and the actual actuator temperature.

- 19. (Previously Presented) Method according to claim 17, wherein the actuator temperature is estimated by means of an actuator temperature model.
- 20. (Previously Presented) Method according to claim 13, wherein the correction factor kη depends on the actuator efficiency.
- 21. (Previously Presented) Method according to claim 13, wherein the correction factor kn depends on a measured or estimated inclined position of the vehicle.
- 22. (Currently Amended) Method—according to claim 13 for actuating an electromechanical parking brake device for a brake that can be actuated by means of an electromechanical

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actuator, in which the actuator is comprised of an electric motor and a reduction gear that is connected downstream of the electric motor and is provided for converting a rotational motion into a translatory motion, and the electromechanical parking brake device is provided in the form of a locking mechanism which can prevent the rotational motion of the actuator in the direction of release and which can only be released again by further application, wherein during the actuation of the parking brake device, a mean value M_{park} of the torque of the electric motor, which is required for exerting the application force of the brake corresponding to the application of the parking brake, is determined and stored while the actuator position (ϕ) is simultaneously detected, and the electric motor is actuated at later points in time in such a fashion that it generates said torque M_{park} that is multiplied by a correction factor $k\eta = >1$ in order to maintain or increase the exerted tension force, wherein for releasing the parking brake device the electric motor is actuated for a predefined period of time in such a way that a torque specification $M_{rel} = k_{rel} * k_n * M_{park}$ is satisfied.

23. (Currently Amended) Method—according to claim 13 for actuating an electromechanical parking brake device for a brake that can be actuated by means of an electromechanical actuator, in which the actuator is comprised of an electric motor and a reduction gear that is connected downstream of the electric motor and is provided for converting a rotational motion into a translatory motion, and the electromechanical parking brake device is provided in the form of a locking mechanism which can prevent the rotational motion of the actuator in the direction of release and which can only be released again by further application, wherein during the actuation of the parking brake device, a mean value M_{park} of the torque of the electric motor, which is required for exerting the application force of the brake corresponding to the application of the parking brake, is determined and stored while the actuator position (ϕ) is simultaneously detected, and the electric motor is actuated at later points in time in such a fashion that it generates said torque M_{park} that is multiplied by a correction factor $k\eta = >1$ in order to maintain or increase the exerted tension force, wherein for releasing the parking brake device the electric motor is operated for a predefined period of time in such a way that its maximum torque $M_{rel} = M_{max}$ is generated.

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24. (Previously Presented) Method according to claim 13, wherein during releasing the parking brake device a new characteristic curve for actuator position - application force is estimated.